HF Jet Topical Group Report

Our first meeting was held this morning, Friday 22nd, <1 hour ago

Our immediate goals:

(1) discuss the pre-collaboration tracking workfest at BNL May 16-17
(place/time to push software developments, finalize TG response)

(2) organize software development effort
(need to identify new manpower)

(3) discuss future phone meetings

(4) discuss the ALD charge
(Brainstorm cost reduction ideas for each subsystem)

This weekend we will iterate on input to EC+ meeting

Potential Input into EC+

DRAFT UNDER-DEVELOPMENT
(not the opinion of the TG)

IDEAS => COST => SIMULATE

Each idea should comment:

(1) Physics Impact
(2) Cost Savings
(3) Stageablity
(4) Simulation capabilities

Inner vertex:

- ½ pi tracker
  (1) ½ heavy flavor statistics, tracking to vertex on other half
  (2) ½ of materials
  (3) Very Stageable
  (4) HF impact can be estimated readily, primary tracking capabilities more difficult but possible, b-jet ID tools are needed.
- Reduced z coverage
  (1) Reduced HF stats, track to the vertex for other things
  (2) Redesigning the ALICE staves will cost money, chip-only savings ? M
  (3) Repopulating chips on existing staves unattractive, redesign or reproduce HIC?
  (4) Easy to simulate, b-jet ID tools are needed
- Only 2 layers
  (1) Removal of stand-alone tracking capability, potential alignment problems
  (2) ~⅓ of materials
  (3) Very stageable
  (4) Difficult simulate alignment issue, performance easy, b-jet ID tools are needed
- Reuse pixel
  (1) HF program likely not possible, other tracking physics at risk, no spare staves
  (2) Cost savings: ~$4M minus pixel effort cost
  (3) Stageable, but would involve sunk cost of pixel effort
  (4) Basic performance can be simulated, alignment open question, new tools being produced for b-jet ID

+ similar fields for other subsystems